

THE CLAIMS

What is claimed:

1. A bone plate comprising:
an upper surface;
5 a lower surface;
a head portion configured and dimensioned to conform to a metaphysis of a bone;
a shaft portion configured and dimensioned to conform to a diaphysis of a bone;
at least one first hole extending through the upper and lower surfaces and having a
substantially continuous threaded surface for engaging a first screw head; and
10 at least one second hole extending through the upper and lower surfaces and
including a ramp surface for engaging a second screw head to displace the bone plate with
respect to the second screw head.
2. The bone plate of claim 1, wherein the at least one second hole is located in the shaft
15 portion.
3. The bone plate of claim 2, wherein the at least one first hole is located in the head
portion.
- 20 4. The bone plate of claim 3, wherein none of the at least one second hole are located
in the head portion.
5. The bone plate of claim 1, wherein the at least one second hole is substantially
circular.
- 25 6. The bone plate of claim 1, wherein the at least one second hole is elongated.
7. The bone plate of claim 6, wherein the at least one second hole has longitudinally
spaced apart first and second ends, and a ramp surface is located on at least one of the first
30 and second ends.
8. The bone plate of claim 1, wherein the at least one second hole defines an outer
perimeter, and the ramp surface extends substantially completely around the outer
perimeter.

9. The bone plate of claim 1, wherein the ramp surface and the upper surface intersect.
10. The bone plate of claim 1, wherein the bottom surface surrounding the at least one
5 second hole is relieved to minimize contact between the bone and the lower surface.
11. The bone plate of claim 1, wherein the at least one first hole is substantially circular.
12. The bone plate of claim 11, wherein the at least one first hole is substantially
10 cylindrical.
13. The bone plate of claim 11, wherein the at least one first hole tapers from the upper
surface to the lower surface.
14. The bone plate of claim 13, wherein the at least one first hole tapers radially inward
15 from the upper surface to the lower surface.
15. The bone plate of claim 14, wherein the at least one first hole is substantially
frustoconical.
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16. The bone plate of claim 1, wherein the at least one first hole includes a double lead
thread.
17. The bone plate of claim 1, wherein the head portion is twisted.
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18. The bone plate of claim 1, wherein the head portion is curved.
19. The bone plate of claim 1, wherein the head portion is tapered.
20. The bone plate of claim 1, wherein the head portion comprises an anterior fork and a
30 posterior fork.
21. The bone plate of claim 1, wherein at least two of the at least one first hole are
located in the head portion, and the at least two of the at least one first hole have different
35 diameters.

22. The bone plate of claim 1, wherein at least two of the at least one first hole are located in the head portion, and the at least two of the at least one first hole have axes that converge.
- 5 23. A bone plate comprising:
an upper surface;
a lower surface;
at least one threaded hole extending through the upper and lower surfaces for engaging a head of a first bone screw; and
10 at least one non-threaded hole extending through the upper and lower surfaces for receiving a head of a second bone screw.
24. The bone plate of claim 23, wherein the at least one threaded hole is substantially cylindrical.
- 15 25. The bone plate of claim 24, wherein the at least one non-threaded hole is substantially cylindrical.
26. The bone plate of claim 24, wherein the at least one non-threaded hole tapers from
20 the upper surface to the lower surface.
27. The bone plate of claim 26, wherein the at least one non-threaded hole tapers radially inward from the upper surface to the lower surface.
- 25 28. The bone plate of claim 27, wherein the at least one non-threaded hole is substantially frustoconical.
29. The bone plate of claim 23, wherein the at least one threaded hole tapers radially inward from the upper surface to the lower surface.
- 30 30. The bone plate of claim 29, wherein the at least one threaded hole is substantially frustoconical.
31. The bone plate of claim 29, wherein the at least one non-threaded hole is
35 substantially cylindrical.

32. The bone plate of claim 29, wherein the at least one non-threaded hole tapers from the upper surface to the lower surface.
- 5 33. The bone plate of claim 32, wherein the at least one non-threaded hole tapers radially inward from the upper surface to the lower surface.
34. The bone plate of claim 33, wherein the at least one non-threaded hole is substantially frustoconical.
- 10 35. The bone plate of claim 23, further comprising a head portion and a tail portion, wherein the plate is substantially straight from the head portion to the tail portion.
36. The bone plate of claim 23, further comprising a shaft portion configured and dimensioned to conform to a diaphysis of a bone, and a flared head portion configured and dimensioned to conform to a metaphysis of a bone.
- 15 37. The bone plate of claim 36, wherein the flared head portion comprises an anterior fork and a posterior fork.
- 20 38. The bone plate of claim 36, wherein at least one of the threaded holes is located in the flared head portion and at least one of the non-threaded holes is located in the shaft portion.
- 25 39. The bone plate of claim 38, wherein at least one of the threaded holes is located in the shaft portion.
40. The bone plate of claim 39, wherein none of the non-threaded holes are located in the flared head portion.
- 30 41. A bone plating system for fixation of a bone comprising:
a bone plate having an upper surface, a lower surface, and at least one first hole extending through the upper and lower surfaces; and

at least one first screw for insertion through the first hole to anchor the bone plate to the bone, the at least one first screw having a cannula formed therethrough for receiving a guide wire to guide placement of the at least one first screw.

5 42. The bone plating system of claim 41, wherein the at least one first hole has a thread, and the at least one first screw has a threaded head to engage the thread of the first hole.

43. The bone plating system of claim 41, wherein the at least one first hole has a ramp surface for engaging a head of the at least one first screw to move the bone plate relative to
10 the at least one first screw.

44. The bone plating system of claim 41, wherein the head of the at least one first screw is non-threaded.

15 45. The bone plating system of claim 41, wherein the head of the at least one first screw is threaded.

46. The bone plating system of claim 41, wherein the bone plate includes a head portion configured and dimensioned to conform to a metaphysis of a bone, and a shaft portion
20 configured and dimensioned to conform to a diaphysis of a bone.

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